Name: Date:

APES Unit 6 Test Corrections

1. What are the dangers associated with the chat piles? Name three toxins/pollutants found in the chat?

2. Name at least two ways are the metals being transmitted into the community?

3. What else besides the chat piles may also be responsible for heavy metal deposits?

Multiple Choice:
Read each question carefully and select the best answer by circling or highlighting its corresponding letter. (1pt/each)

4. Which of the following is NOT part of the risk assessment?
   a. determining the probability of the particular hazard
   b. determining types of hazards
   c. coming up with an estimate on the chances of how many people could be exposed to a particular risk
   d. informing the public about the chances of risks

Risk assessment is the process of quantifying the probability of harmful effect. In most countries, the approval of certain pesticides industrial chemicals, power plants, and so on is not allowed unless it has been demonstrated through risk assessment that they do not increase the risk of death or illness above a certain level.

5. Cancer is greatest in numbers per capita in...
   a. developing nations b. developed nations
   c, impoverished nations d. no correlation in cancer and socioeconomic status

Individuals living in developed nations are exposed to far more carciegens than individuals who live in less industrious environments. Looks like there is a price to be payed living high on the hog.

6. The greatest number per capita of people infected with AIDS or the AIDS virus is...
   a. Australia b. Asia
   b. sub Saharan Africa d. South America

7. How many people aged 15-24 are newly infected worldwide with the AIDS virus each day?
   a. 60 b. 600
   c. 6,000 d. 60,0000

An estimated 10 million people age 15-24 are living with AIDS. Half of all new infections, more than 6,000 each day occur among young people.

8. The threshold dose-response model
   a. cannot be used to determine how toxic a substance is
   b.implies a risk associated with all doses
   c. implies that no detectable harmful effects can occur below certain dose
   d. is similar to a linear dose-response model

The threshold dose-response model has long been recognized as the most important tool in understanding the risk assessment processes used by regulatory and public health agencies worldwide.

Name: Date:

9. A federal tax on a pack of cigarettes is an example of
   a. full-cost pricing b.an internal cost
   c. an external cost d. a marginal cost

Full cost pricing accounts for the cost of a good when its internal costs and its estimated short and long term costs are included in its market price.

10. Which of the following is NOT part of a cost-benefit analysis?
   a. Judging and assessing inefficiencies in the private sector and their impact on health and safety
   b. determining external costs to a society
   c. meeting societal needs in a cost-effective manner
   d. judging whether public services provided by the private sector are adequate

Cost benefit analysis is a technique for deciding whether to make a change and requires adding up the value of the benefits of a course of action and subtracting the costs associated with it.

11. Toxic pollutants trapped indoors and mixed with mold spores has led to...
   a.fungi remediation
   b.decreased sick days
   c. sick building syndrome
   d. construction fines

12. Hydrologists check the health of freshwater streams by measuring...
   a. total organic carbon levels
   b. particulate levels
   c. sodium levels
   d. algal levels

All living organisms contain the element carbon. More life means healther waters.

13. Which of the following pH measurements from water could indicate acidic mine drainae?
   a. pH 5.1
   b. pH 6.8
   c. pH 7.3
   d. pH 8.2

The pH scale measures from 0-14. Anything less than 7 is considered to be acidic and anything over 7 is considered to be basic. Farther away from 7 the more concentrated the solution is.

14. About 70% of U.S. hazardous waste comes from...
   a. smelting, mining, and metal manufacturing b. nuclear power plants
   c. chemical and petroleum industries d. agricultural pesticides

All are heavy polluters, but in 1999 over 20,000 hazardous waste generators produced over 40 million tons of hazardous wastes.

15. Effects produced from a long term, low level exposure are called...
   a. acute
   b. chronic
   c. symptomatic
   d. pathologic

Chronic diseases are of long duration with slow progress.

16. Which of the following techniques is not an example of bioremediation?
   a. composting
   b. rhizofiltration
   c. phytoremediation
   d. all are examples of bioremediation

17. Problems associated with risk management include...
   a. people making a risk assessment vary in their conclusions of long-term versus short term risk and benefits
   b. some technologies benefit some groups and harm others
   c. there is consideration of the cumulative impacts of various risks rather than consideration of each impact separately
   d. all of the above are true

Risk assessment is the process of evaluating the likelihood of an adverse health affect. Risk assessment does NOT determine the level of allowable or acceptable risks. That is risk management.

18. Currently, the single most significant threat to human health is...
   a. pollution
   b. accidents

Name: Date:

c. non transmissible diseases such as cancer and heart disease
d pathogenic organism

For most of human history, pathogenic organisms were the greatest threat to human health. Today, cardiovascular, cancer, and other non-infectious diseases have become the major killers.

19. Before modern medicine, what was the single most significant threat to human health?
a. pollution
b. accidents
c. non transmissible diseases such as cancer and heart disease
d pathogenic organism

For most of human history, pathogenic organisms were the greatest threat to human health. Today, cardiovascular, cancer, and other non-infectious diseases have become the major killers.

20. The accumulation of DDT by peregrine falcons, brown pelican, and other predatory birds during the 1960s is an example of ...
a. acute exposure
b. bioaccumulation
c. biomagnification
d. bioremediation

Biomagnification is the increase in teh concentration of toxic substances as one moves up the food chain. Animals at the top of the food chain receive the highest concentration of toxins and experience the worst effects.

21. The biggest threat to any species is...
a. disease
b. loss of habitat
c. predation
d. low reproductive rates

Don't ever miss this question! We have had it on four different exams! The loss of habitat is the most detrimental factor to any species.

22. A concentration of 30 ppm would be equivalent to (oh no, MATH! Just think what ppm stands for)...
a. .03%
b. .003%
c. .0003%
d. .00003%

To change parts per million to a % move the decimal over four places. $\frac{30}{1{,}000{,}000} = \frac{3}{100{,}000} = .00003$ the divide by 100 = .003%

23. Preserving the value of a resource for the future is a(n)...
a. aesthetic value
b. existence value
c. cultural value
d. use value

The correct answer is Option Value. An option value is the value that people place on having the option to enjoy something in the future. Everyone got the question correct.

24. It costs a copper smelter $200 to reduce emissions by 1 ton and $250 for each additional ton. It costs an electric company $100 to reduce its emissions by 1 ton and $150 for each additional ton. What is the least expensive way for of reducing total emissions by 2 tons?
a. legislate that both firms must reduce emissions by 1 ton
b. Charge $251 for every ton they emit
c. allow each firm to by a $151 permit to pollute
d. file an injunction to halt production until the firms reduce emission by 2 tons

The copper smelter would pay $450 to emit 2 tons of pollutants, the electric company would pay $250 to emit two tons of pollutants. Therefore, $151 would be the least expensive option for the companies to continue to pollute.

25. Externalized costs of nuclear power include all of the following EXCEPT...
a. disposing of nuclear wastes
b. Price-Anderson Indemnity Act
c. government subsidies
d. all are externalized costs

External costs are the costs that are born by people other than the producer of a good.

26. Why is lead poisoning and lead in the human body so detrimental to human growth?
a. lead can clot blood and lead to heart diesease
b. lead kills off white blood cells and weakens a person's immune system
c. lead blocks calcuim in the body from taking its normal course
d. lead reacts with potassium and creates a toxin that kills the liver

Name: Date:

APES Unit 2.4 Test